Complete Summary

TITLE

Coronary artery disease: angina without procedure hospital admission rate.

SOURCE(S)

AHRQ quality indicators. Guide to prevention quality indicators: hospital admission for ambulatory care sensitive conditions [version 3.0a]. Rockville (MD): Agency for Healthcare Research and Quality (AHRQ); 2006 Feb 20. 58 p.(AHRQ Pub; no. 02-R0203).

Measure Domain

PRIMARY MEASURE DOMAIN

Population Health

The validity of measures depends on how they are built. By examining the key building blocks of a measure, you can assess its validity for your purpose. For more information, visit the Measure Validity page.

SECONDARY MEASURE DOMAIN

Access

Brief Abstract

DESCRIPTION

This measure is used to assess the number of admissions for angina (without procedures) per 100,000 population.

As a Prevention Quality Indicator (PQI), angina without procedure is not a measure of hospital quality, but rather one measure of outpatient and other health care. This indicator has unclear construct validity, because it has not been validated except as part of a set of indicators. Providers may reduce admission rates without actually improving quality of care by shifting care to an outpatient setting. Some angina care takes place in emergency rooms. Combining inpatient and emergency room data may give a more accurate picture.

RATIONALE

Prevention is an important role for all health care providers. Providers can help individuals stay healthy by preventing disease, and they can prevent complications of existing disease by helping patients live with their illnesses. To fulfill this role, however, providers need data on the impact of their services and the opportunity to compare these data over time or across communities. Local, State, and Federal policymakers also need these tools and data to identify potential access or quality-of-care problems related to prevention, to plan specific interventions, and to evaluate how well these interventions meet the goals of preventing illness and disability.

While these indicators use hospital inpatient data, their focus is an outpatient health care. Except in the case of patients who are readmitted soon after discharge from a hospital, the quality of inpatient care is unlikely to be a significant determinant of admission rates for ambulatory care sensitive conditions. Rather, the Prevention Quality Indicators (PQIs) assess the quality of the health care system as a whole, and especially the quality of ambulatory care, in preventing medical complications. As a result, these measures are likely to be of the greatest value when calculated at the population level and when used by public health groups, State data organizations, and other organizations concerned with the health of populations.

These indicators serve as a screening tool rather than as definitive measures of quality problems. They can provide initial information about potential problems in the community that may require further, more in-depth analysis.

Both stable and unstable angina are symptoms of potential coronary artery disease. Effective management of coronary artery disease reduces the occurrence of major cardiac events such as heart attacks, and may also reduce admission rates for angina.

Proper outpatient treatment may reduce admissions for angina (without procedures).

PRIMARY CLINICAL COMPONENT

Angina (without procedures); hospital admission rates

DENOMINATOR DESCRIPTION

Population in Metro Area or county, age 18 years and older

NUMERATOR DESCRIPTION

Discharges, age 18 years and older, with International Classification of Diseases, Ninth Revision, Clinical Modification (ICD-9-CM) principal diagnosis codes* for angina. Discharges with a procedure code* for cardiac procedure, patients transferring from another institution, or Major Diagnostic Category (MDC) 14 (pregnancy, childbirth, and puerperium) are excluded.

*Refer to Technical Specifications document cited in the "Companion Documents" field for ICD-9-CM codes.

Evidence Supporting the Measure

EVIDENCE SUPPORTING THE VALUE OF MONITORING THE ASPECT OF POPULATION HEALTH

- A clinical practice guideline or other peer-reviewed synthesis of the clinical evidence
- One or more research studies published in a National Library of Medicine (NLM) indexed, peer-reviewed journal

Evidence Supporting Need for the Measure

NEED FOR THE MEASURE

Monitoring health state(s)
Variation in health state(s)

EVIDENCE SUPPORTING NEED FOR THE MEASURE

AHRQ quality indicators. Guide to prevention quality indicators: hospital admission for ambulatory care sensitive conditions [version 3.0a]. Rockville (MD): Agency for Healthcare Research and Quality (AHRQ); 2006 Feb 20. 58 p.(AHRQ Pub; no. 02-R0203).

State of Use of the Measure

STATE OF USE

Current routine use

CURRENT USE

Monitoring health state(s)
National reporting

Application of Measure in its Current Use

CARE SETTING

Ambulatory Care
Community Health Care

PROFESSIONALS RESPONSIBLE FOR HEALTH CARE

Physicians
Public Health Professionals

LOWEST LEVEL OF HEALTH CARE DELIVERY ADDRESSED

Counties or Cities

TARGET POPULATION AGE

Age greater than or equal to 18 years

TARGET POPULATION GENDER

Either male or female

STRATIFICATION BY VULNERABLE POPULATIONS

Unspecified

Characteristics of the Primary Clinical Component

INCIDENCE/PREVALENCE

One study shows that unstable angina accounts for 16.3% of total admissions for ambulatory care sensitive conditions.

EVIDENCE FOR INCIDENCE/PREVALENCE

Blustein J, Hanson K, Shea S. Preventable hospitalizations and socioeconomic status. Health Aff (Millwood)1998 Mar-Apr;17(2):177-89. PubMed

ASSOCIATION WITH VULNERABLE POPULATIONS

- Billings et al. found that low-income zip codes in New York City had 2.3 times more angina hospitalizations than high-income zip codes. Household income explained 13% of this variation.
- Millman et al. reported that low-income zip codes had 2.7 times more angina hospitalizations per capita than high-income zip codes.

EVIDENCE FOR ASSOCIATION WITH VULNERABLE POPULATIONS

Billings J, Zeital L, Lukomnik J, et al. Analysis of variation in hospital admission rates associated with area income in New York City [unpublished].

Millman M, editor(s). Access to health care in America. Committee on Monitoring Access to Personal Health Care Services. Washington (DC): National Academy Press; 1993. 240 p.

BURDEN OF ILLNESS

Unspecified

UTILIZATION

Unspecified

COSTS

Unspecified

Institute of Medicine National Healthcare Quality Report Categories

IOM CARE NEED

Getting Better

IOM DOMAIN

Effectiveness
Timeliness

Data Collection for the Measure

CASE FINDING

Both users and nonusers of care

DESCRIPTION OF CASE FINDING

Population in Metro Area or county, age 18 years and older

DENOMINATOR SAMPLING FRAME

Geographically defined

DENOMINATOR INCLUSIONS/EXCLUSIONS

Inclusions
Population in Metro Area or county, age 18 years and older

Exclusions
Unspecified

RELATIONSHIP OF DENOMINATOR TO NUMERATOR

All cases in the denominator are not equally eligible to appear in the numerator

DENOMINATOR (INDEX) EVENT

Patient Characteristic

DENOMINATOR TIME WINDOW

Time window is a single point in time

NUMERATOR INCLUSIONS/EXCLUSIONS

Inclusions
Discharges, age 18 years and older, with International Classification of Diseases, Ninth Revision, Clinical Modification (ICD-9-CM) principal diagnosis codes* for angina

Exclusions
Discharges with a procedure code* for cardiac procedure, patients transferring from another institution, or Major Diagnostic Category (MDC) 14 (pregnancy, childbirth, and puerperium) are excluded.

*Refer to Technical Specifications document cited in the "Companion Documents" field for ICD-9-CM codes.

MEASURE RESULTS UNDER CONTROL OF HEALTH CARE PROFESSIONALS, ORGANIZATIONS AND/OR POLICYMAKERS

The measure results are somewhat or substantially under the control of the health care professionals, organizations and/or policymakers to whom the measure applies.

NUMERATOR TIME WINDOW

Institutionalization

DATA SOURCE

Administrative data

LEVEL OF DETERMINATION OF QUALITY

Does not apply to this measure

TYPE OF HEALTH STATE

Adverse Health State

PRE-EXISTING INSTRUMENT USED

Unspecified

Computation of the Measure

SCORING

Rate

INTERPRETATION OF SCORE

A lower score is desirable

ALLOWANCE FOR PATIENT FACTORS

Analysis by subgroup (stratification on patient factors, geographic factors, etc.)
Risk adjustment method widely or commercially available

DESCRIPTION OF ALLOWANCE FOR PATIENT FACTORS

Observed (raw) rates may be stratified by areas (Metro Areas or counties), age
groups, race/ethnicity categories, and sex.

Risk adjustment of the data is recommended using age and sex.

Application of multivariate signal extraction (MSX) to smooth risk adjusted rates is
also recommended.

STANDARD OF COMPARISON

External comparison at a point in time
External comparison of time trends
Internal time comparison

Evaluation of Measure Properties

EXTENT OF MEASURE TESTING

Each potential quality indicator was evaluated against the following six criteria,
which were considered essential for determining the reliability and validity of a
quality indicator: face validity, precision, minimum bias, construct validity, fosters
real quality improvement, and application. The project team searched Medline for
articles relating to each of these six areas of evaluation. Additionally, extensive
empirical testing of all potential indicators was conducted using the 1995-97
Healthcare Cost and Utilization Project (HCUP) State Inpatient Databases (SID)
and Nationwide Inpatient Sample (NIS) to determine precision, bias, and
construct validity. Table 1 in the original measure documentation summarizes the
results of the literature review and empirical evaluations on the Prevention Quality
Indicators (PQI). Refer to the original measure documentation for details.

EVIDENCE FOR RELIABILITY/VALIDITY TESTING

AHRQ quality indicators. Guide to prevention quality indicators: hospital admission
for ambulatory care sensitive conditions [version 3.0a]. Rockville (MD): Agency
for Healthcare Research and Quality (AHRQ); 2006 Feb 20. 58 p.(AHRQ Pub; no.
02-R0203).

ORIGINAL TITLE

Angina without procedure admission rate (PQI 13).

MEASURE COLLECTION

Agency for Healthcare Research and Quality (AHRQ) Quality Indicators

MEASURE SET NAME

Agency for Healthcare Research and Quality (AHRQ) Prevention Quality Indicators

DEVELOPER

Agency for Healthcare Research and Quality

INCLUDED IN

National Healthcare Disparities Report (NHDR)

ADAPTATION

This indicator was originally developed by Billings and colleagues in conjunction with the United Hospital Fund of New York.

PARENT MEASURE

Unspecified

RELEASE DATE

2001 Oct

REVISION DATE

2006 Feb

MEASURE STATUS

This is the current release of the measure.

This measure updates a previous version: AHRQ quality indicators. Guide to prevention quality indicators: hospital admission for ambulatory care sensitive conditions [version 2.1, revision 4]. Rockville (MD): Agency for Healthcare Research and Quality (AHRQ); 2004 Nov 24. 115 p. (AHRQ Pub; no. 02-R0203).

SOURCE(S)

AHRQ quality indicators. Guide to prevention quality indicators: hospital admission for ambulatory care sensitive conditions [version 3.0a]. Rockville (MD): Agency for Healthcare Research and Quality (AHRQ); 2006 Feb 20. 58 p.(AHRQ Pub; no. 02-R0203).

MEASURE AVAILABILITY

The individual measure, "Angina without Procedure Admission Rate (PQI 13)," is published in "AHRQ Quality Indicators. Guide to Prevention Quality Indicators: Hospital Admission for Ambulatory Sensitive Conditions." This document is available in Portable Document Format (PDF) from the Prevention Quality Indicators Download page at the Agency for Healthcare Research and Quality (AHRQ) Quality Indicators Web site.

For more information, please contact the QI Support Team at support@qualityindicators.ahrq.gov.

COMPANION DOCUMENTS

The following are available:

- AHRQ quality indicators. Prevention quality indicators: technical specifications [version 3.0b]. Rockville (MD): Agency for Healthcare Research and Quality (AHRQ); 2006 May 1. 20 p. (AHRQ Pub; no 02-R0202). This document is available in Portable Document Format (PDF) from the Agency for Healthcare Research and Quality (AHRQ) Quality Indicators Web site.
- AHRQ quality indicators. Prevention quality indicators: software documentation [version 3a] - SAS. Rockville (MD): Agency for Healthcare Research and Quality (AHRQ); 2006 Feb 20. 35 p. (AHRQ Pub; no. 02-R0202). This document is available in PDF from the AHRQ Quality Indicators Web site.
- AHRQ quality indicators. Prevention quality indicators: software documentation [version 3a] - SPSS. Rockville (MD): Agency for Healthcare Research and Quality (AHRQ); 2006 Feb 20. 32 p. (AHRQ Pub; no. 02-R0207). This document is available in PDF from the AHRQ Quality Indicators Web site.
- AHRQ quality indicators. Software documentation: Windows [version 3.0]. Rockville (MD): Agency for Healthcare Research and Quality (AHRQ); 2006 Feb 20. 72 p. This document is available in PDF from the AHRQ Quality Indicators Web site.
- Prevention quality indicators (PQI): covariates, version 3.0a. Rockville (MD): Agency for Healthcare Research and Quality (AHRQ); 2006 Feb 20. 10 p. This document is available in PDF from the AHRQ Quality Indicators Web site.
- Remus D, Fraser I. Guidance for using the AHRQ quality indicators for hospital-level public reporting or payment. Rockville (MD): Agency for Healthcare Research and Quality; 2004 Aug. 24 p. This document is available in PDF from the AHRQ Quality Indicators Web site.
- UCSF-Stanford Evidence-based Practice Center. Davies GM, Geppert J, McClellan M, et al. Refinement of the HCUP quality indicators. Rockville (MD): Agency for Healthcare Research and Quality (AHRQ); 2001 May. (Technical review; no. 4). This document is available in PDF from the AHRQ Quality Indicators Web site.

- HCUPnet, Healthcare Cost and Utilization Project. [internet]. Rockville (MD): Agency for Healthcare Research and Quality (AHRQ); 2004 [Various pagings]. HCUPnet is available from the AHRQ Web site.

NQMC STATUS

This NQMC summary was completed by ECRI on December 19, 2002. The information was verified by the Agency for Healthcare Research and Quality on January 9, 2003. This NQMC summary was updated by ECRI on April 6, 2004, February 18, 2005, and again on February 27, 2006. The information was verified by the measure developer on July 31, 2006.

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